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ABSTRACT

Anthropology and interdisciplinary social sciences (ISS) education at two-year colleges are examined as revealed in a study of science education conducted by the Center for the Study of Community Colleges that involved a review of the literature, an examination of the catalogs and class schedules from 175 institutions, and a survey of 1,125 science instructors. Part I of the report discusses the literature review findings in terms of: (1) rationales for interdisciplinary survey courses in social sciences; (2) methods of providing ISS instruction to both transfer and terminal students; (3) the pros and cons of team instruction; (4) specialized ISS courses such as gerontology and environmental studies--and in relation to anthropology courses--(5) the small role of anthropology within the community colleges; and (6) innovative instructional approaches. Part II analyzes ISS and anthropology curricula and instruction as revealed in the catalog and schedule study and the instructor survey. Frequency of course offerings is considered for eight ISS and seven anthropology components. Additionally, faculty characteristics, enrollments, course objectives, classroom and out-of-class activities, grading, instructional materials, and areas for improvement are considered. Part III summarizes conclusions and recommendations. A bibliography, a list of surveyed institutions, descriptions of each of the disciplinary categories, and the questionnaire are appended. (JP)

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Science Education in Two-Year Colleges

INTERDISCIPLINARY SOCIAL SCIENCES

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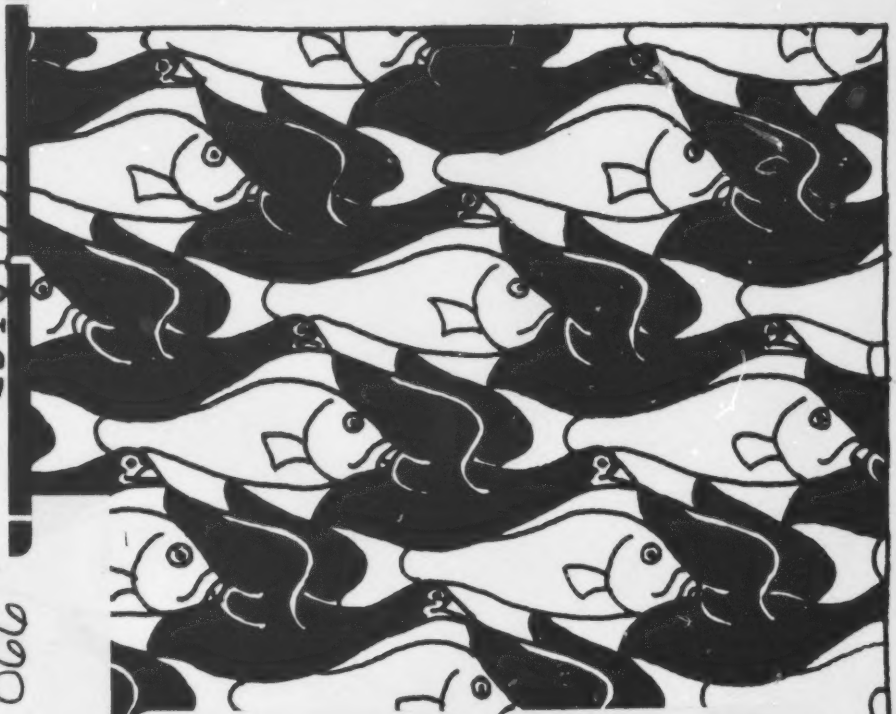

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SCIENCE EDUCATION IN TWO-YEAR COLLEGES:
INTERDISCIPLINARY SOCIAL SCIENCES

by

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January 1980

Center for the Study of Community Colleges

and

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PREFACE

This monograph is one of a series of twelve publications dealing with the sciences in two-year colleges. These pieces are concerned with agriculture, biology, chemistry, earth and space sciences, economics, engineering, integrated social sciences and anthropology, integrated natural sciences, mathematics, physics, psychology, and sociology. Except for the monograph dealing with engineering transfer programs, each was written by staff associates of the Center for the Study of Community Colleges under a grant from the National Science Foundation (#SED 77-18477).

In addition to the primary author of this monograph, several people were involved in its execution. Andrew Hill and William Mooney were instrumental in developing some of the procedures used in gathering the data. Others involved in tabulating information were Miriam Beckwith, Jennifer Clark, William Cohen, Sandra Edwards, Jack Friedlander, and Cindy Issacson.

Field Research Corporation in San Francisco, under the direction of Eleanor Murray, did the computer runs in addition to printing the instructor survey employed in that portion of the project dealing with instructional practices. Bonnie Sanchez of the ERIC Clearinghouse for Junior Colleges and Janice Newmark, Administrative Coordinator of the Center for the Study of Community Colleges, prepared the materials for publication. Carmen Mathenge was responsible for manuscript typing. Jennifer Clark did the final compilation of the various bibliographies for each monograph.

Florence B. Brawer coordinated the writing activities and edited each of the pieces. Arthur M. Cohen was responsible for overseeing the entire project.

In addition to these people who provided so much input to the finalization of this product, we wish to thank Nancy Steinbach of the National Council for the Social Studies who reviewed the manuscript and Ray Hannapel and Bill Aldridge of the National Science Foundation, who were project monitors.

Arthur M. Cohen
Project Director

Florence B. Brawer
Publications Coordinator

SCIENCE EDUCATION IN TWO-YEAR COLLEGES:
INTERDISCIPLINARY SOCIAL SCIENCES

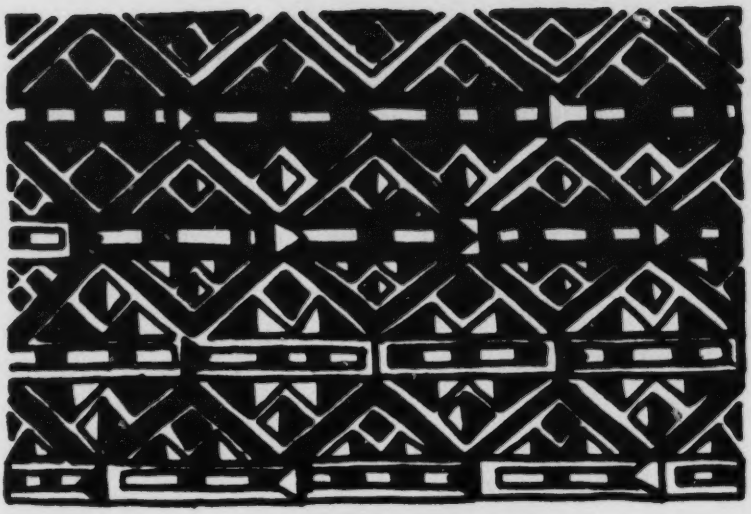
Under a grant from the National Science Foundation (NSF), the Center for the Study of Community Colleges has been involved in a study of curriculum and instruction in two-year college science and science-related technology programs. Four methods were used to obtain the desired information on the various disciplines under the purview of NSF: a literature review, an analysis of catalogs, an examination of class schedules, and a survey of instructors. This monograph is concerned with two of the disciplines: anthropology and interdisciplinary social science. Within this report, interdisciplinary social science is defined as courses or programs that combine two or more disciplines from within the social sciences, or courses and programs that combine several social science disciplines with a biological or physical science or a humanities emphasis.

The sample for the study included 175 colleges selected at random along the primary variables of type of control (public/private) and geographic locale (Appendix A), and the secondary variables of emphasis (comprehensive, technological, liberal arts), organization (multi or single campus), and size. Catalogs and course schedules for the academic year 1977-78 were obtained from each of the 175 colleges. From these, data on curriculum were gathered. The catalogs provided the basis for determining the number and kinds of classes and sections actually offered during a given term.

After the science class sections offered in Fall 1977 were tabulated, every 13th section was selected and the instructor of that section was sent a questionnaire. The overall response rate to this survey was 85.5 percent. This questionnaire provided instructional data on course goals, instructional practices and materials, course requirements, and student achievement criteria. The sampling procedure and methodology for these studies

are described in detail by Hill and Mooney (1979).

This monograph is divided into three sections. The first is a review of the literature, consisting primarily of reports and articles on interdisciplinary social science and anthropology. The second section presents the findings of our studies of curriculum and instructional practices. The monograph concludes with some recommendations and directions for future research.



PART I

THE LITERATURE

INTERDISCIPLINARY SOCIAL SCIENCES

Introductory or Survey Courses

Proponents of interdisciplinary courses usually espouse a two-pronged argument: one a reaction against the prevailing academic mode, the other a rationale for the interdisciplinary approach. The first prong is that courses organized along disciplinary boundaries have isolated knowledge into discrete but artificial compartments, have fostered a fragmentation of thinking when contemporary experience forces students and teachers to comprehend knowledge as substantially interlocking and interdependent, have emphasized knowing about problem-solving rather than knowing how to solve problems, and have stressed mastery of a body

of knowledge which is for many students abstract and divorced from the reality of their lives (Friedman, 1969; Kieffer, 1975; Phillips, 1971; Smith, 1970). The second prong is that interdisciplinary courses can help to alleviate these problems; allow students to make sense out of the world by "exploring common areas and common problems from a variety of angles at the same time" (Smith, 1970, p. 135); and most recently, expand the investigation of areas or issues that cannot be adequately examined from a single perspective (Cheeves on Mexican-American studies, 1969; Hersey on women's studies, 1977; Korim, 1974; Lombardi describing aspects of Black studies, 1971; and Sargent on gerontology, 1976).

The argument in favor of interdisciplinary courses in the social sciences is expanded and strengthened by such writers as Bean (1972), Davis (1971), Elliott and others (1976-77), Morris (1967), Weiss (1972), and Ziegler (1978), who all see the value that these courses hold for the two-year college and its clientele. Their position is that interdisciplinary courses maximize the exposure to social sciences in a short time interval. This is extremely advantageous for those students who have heavy schedules because of their required and/or recommended technical courses and for those students who will continue their education no further than the two-year college, if, indeed, they complete even two years. Not only can an interdisciplinary course present the perspectives, major concepts, and primary ideas of the social science disciplines, it can also organize these around a central theme or issue. A theme or problem oriented course is meaningful and relevant to all students in their role as citizens, since all will need problem-solving skills as well as the ability to examine and critically analyze alternative solutions to social issues.

The literature does not focus on the question of sequence of linearity. Unless a course is specifically designated as a part of a two or three quarter/semester cycle, it is intended as an introductory course open to a broad cross-section of students. Two exceptions to this are a report by Fechter (1970) on an honors seminar for final semester sophomores whose work in the social sciences has been superior, and the

Los Medanos plan for general education (Carhart & Collins, 1973), where an introductory generic course in the behavioral sciences is required prior to students pursuing courses in specific disciplines.

Instead of exploring a sequence in interdisciplinary social science offerings, writers usually turn their attention to the issue of whether there should be one course to serve both transfer and terminal students or separate courses for non-transfer students. The classification "terminal" refers to students who are pursuing the many one- or two-year vocational and technical programs, and to students who have either no definite occupational goal or one that is unrealistic, given their capacities and/or their prior academic preparation.

There is a feeling that with one course for both groups, two alternatives exist for dealing with the wide diversity of students. The first is that the teacher adjusts the course content and method to the less able students and gradually the standards are relaxed or, as frequently charged, "watered-down" (Apsler, 1967). The other is that the instructor maintains the course standards and the prevailing but unspoken attitude is that students either sink or swim, with many of the less able students sinking either by dropping out or by failing (Apsler, 1967; Arnfield, 1968; Johnson, 1970).

Although there may be several ways to circumvent such a situation, the literature seems to focus on two. The first is that an entire core or block program is established for those students who, for want of a better word, are labeled with the vague term "terminal." The second is that special terminal courses are devised, some of which are in individual disciplines and serve as adjuncts to the technical or business instruction. A variation on this approach and one that is considered superior by its practitioners (see Apsler, 1967; Kuhn and White cited in Apsler, 1967; Ziegler, 1978) is to institute an interdisciplinary course designed especially for such students.

In the core or block program an entire general education curriculum is established. This usually covers four major areas: social science, communications, physical science, and humanities (Arnfield, 1968;

Johnson, 1970; Rotella, 1966; Vogel & Schonbuch, 1973). At Macomb County and Tarrant County Community Colleges, the programs feature a one-year general education curriculum integrated around specific units of study; administrative support for an innovative approach, block scheduling, whereby students attend all classes with the same group; a team of teachers, each representing an academic area; small classes; development of texts and program materials to meet the needs of a specific type of student; and extensive vocational counseling. All of the above are felt to be critical elements in the attempt to curb the failure and attrition rates that are common to this group.

Although a core or block program may, in fact, be superior to the more typical but less systematic class schedule, it is unrealistic in light of today's student population. Consequently, the more viable approach is a single course designed for the terminal or marginal student. While not gainsaying the benefits that interdisciplinary courses can provide for all students, certain writers feel that such courses are particularly suited to a non-transfer group. Their suitability lies in their ability to expose such students to a wide-angle look at human society and to acquaint them with the various social science disciplines.

An early but articulate spokesperson for the above approach is Apsler (1967), who not only developed such a course for Clark College (Washington), but spent several months visiting colleges nationwide to see how other institutions dealt with the problem of social sciences classes for the terminal or marginal student. His interviews and visitations revealed that educators were aware of the problem, but it was only in the older, more established institutions or those in metropolitan areas that practical steps had been taken. Some of these efforts were successful; others were not. Among the reasons courses failed were instructors' deep resistance to change; inability to select students who would benefit from such a "second track;" inadequate support by administrators in terms of funds, teaching loads, and personnel; and inexperienced and unsuitable teachers. Conversely, the essential ingredients for a successful program were a supportive and understanding counseling

staff working with the instructors and guiding students into the course; administrators who offer support in fact as well as in words; cooperative vocational coordinators and instructors, and most importantly, enthusiastic and experienced instructors.

More recent writers on this topic would add that centering a course around a specific theme or issue relevant to the students adds a positive element to such classes. Three examples of such theme-oriented courses designed specifically for technical, non-transfer students are Technology and American Society, Labor and American Society, and the Community and American Society (Ziegler, 1978). Other examples are Jamestown (New York) Community College's course in Human Behavior (Edman & Collins 1974-75) and San Bernardino Valley College's The Consumer Perspective (Palmer, 1975). It must be remembered, however, that the theme or problem approach is not limited to non-transfer or non-occupational courses. In fact, this appears to be the favored approach in interdisciplinary classes, regardless of student designation (Cantor, 1978; Cohen, 1978). The latter writer points out that while the themes or issues presented vary with the times and with what society sees as its critical problems, the approach itself remains constant in interdisciplinary survey courses.

Advocates of a single course for both transfer and terminal students include some educators who, in the proposal and design for a general education course or program, make an implicit assumption that it is intended to serve all students (Butzek & Carr, 1976; Janaro, 1975). Others speak directly to this issue (Kieffer, 1975; Phillips, 1971; Tate, 1974; Waller, 1977). Waller and Phillips argue from the basis that an introductory interdisciplinary course is part of the general education function of the community college and that general education is needed for all students. Both see such a course as terminal in nature--emphasizing generalizations, concepts, and understandings--rather than as a prerequisite for more advanced work, and both see the necessity of the same caliber course because there is the practical consideration of cross-over between transfer and terminal programs.

Tate's position is derived not from a philosophical basis but from

his study, in which a number of variables were correlated with success in social science courses. Not unexpectedly, verbal ability was important in success for both transfer and vocational-technical students but (and this is where his results are important) at least two-thirds of the grades earned in social science courses by both groups were not accounted for by any of the predictor variables. Tate's conclusion is that with the move toward individualized instruction, the characteristics of transfer versus occupational-technical student will give way in importance to the need to assess the peculiarities of the individual student. By extension, these results point toward the need not for separate courses, but for courses that allow students to move at their own rate as they complete specifically defined behavioral objectives.

An issue that is relevant to all interdisciplinary courses and programs, regardless of type of student for whom intended, is what is meant by the term interdisciplinary and how it should be taught--by a single teacher or by a team of teachers. Although, by definition, all the courses selected in our survey roster were interdisciplinary, only half the instructors surveyed in these classes responded affirmatively to the question: Was this class conducted as an interdisciplinary course? What this probably means is that although various social science disciplines were brought into the course, this was effected by one instructor rather than by having a team of teachers working together to incorporate their disciplines.

The literature reflects this single versus team-taught conundrum. A single teacher is frequently involved because many administrators are unwilling to alter existing rules on teacher load and enrollments, and they sometimes view team-teaching as an inefficient use of faculty manpower (Apsler, 1967; Palmer, 1975). But administrative ease aside, there are some advantages to single teacher as opposed to team-taught courses. Single teacher courses avoid the problems that arise regarding student identification with an instructor in the larger team-taught course, and the confusion that students sometimes experience when exposed to several instructors and their varying opinions and approaches. In

addition, the difficulty of achieving cooperation and agreement on goals common to team-taught courses does not arise (Benson, 1972; Hursey, 1977; Palmer, 1975). The major weakness of the single teacher approach is inadequate training and preparation. While some instructors may be qualified because their academic work was done in two disciplines or because they have, by the very nature of community college teaching, taught in more than one discipline, the consensus is that most community college instructors are not prepared to be generalists or interdisciplinarians (Banks, 1973; Delaney, 1974; Hursey, 1977; Lockwood, 1968; Smith, 1970).

At their best, team-taught courses allow students to take advantage of the diverse backgrounds, interests, and strengths of the instructors involved. Such courses can expose students to several disciplines and viewpoints simultaneously. They can provide students with the experience of approaching and analyzing social problems, using concepts and methods from various disciplines while demonstrating that there are no set answers (Banks, 1973; Friedman, 1969; Phillips, 1971). In addition, the experimental nature of some interdisciplinary courses is the "opportunity for new personal or group dynamic stiuations in the classroom" (Palmer, 1975, p. 8), both amongst the teachers who find it a learning and enriching professional experience and between instructors and students (Cantor, 1978; Collins, 1977; Delaney, 1974).

However, these very assets also can be liabilities. Students and instructors have complained that it is difficult to get to know each other, and some students find the absence of a unified viewpoint confusing. The most critical problem is how to achieve cooperation and agreement on course goals among teachers from various disciplines. There is a tendency on the part of an instructor to resist giving up "some of his or her own discipline attachment in order to serve the joint interdisciplinary purpose of the course" (Palmer, 1975, p. 6). There is a need for instructors to avoid assuming a proprietary attitude toward a topic or toward the course in general, to avoid competitiveness, and to encourage all team members to address themselves to the various subjects. Teachers are resistant to change and may have difficulty

breaking away from the disciplinary outlook by integrating subject matter. Because of all these problems, interdisciplinary courses sometimes regress into "buffet style" arrangement where one instructor lectures on his/her discipline one day, another on the next, and so on (Miller & Brown, 1977).

The most successful interdisciplinary courses seem to have three elements in common. First, they have a theme or problem so that the "issue to be examined takes priority over introducing disciplines" (Palmer, 1975, p. 3). Second, the materials used have been carefully selected to accentuate the interdisciplinary nature of the course. The third element involves a great deal of preplanning by the instructors. While in the classroom the results may appear casual and even unstructured, they are actually the product of a great deal of time and work by the team members to organize the course, to bring together the various disciplines, and develop a variety of learning activities (Banks, 1973; Carhart & Collins, 1973; Hursey, 1977; Janaro, 1975; Lawler, 1977).

Of course all of these factors depend upon the type of instructor who is teaching such courses. Cantor (1978) reports that, "Instructors who plan interdisciplinary syllabi and programs and participate in team-teaching efforts are usually high achievers, conscious of the fact that they are innovators, enthusiastic about their cause, and excited about changing the traditional system. This excitement often is communicated to the students who are tired of the traditional approaches to knowledge and are eager to participate in a more informal, experimental program" (p. 59). No research data are available regarding this issue, but the question does arise as to how long instructors can sustain the kind of energy, enthusiasm, and sixty-hour work week needed to make interdisciplinary courses and programs a success. Various writers and participants allude to the enormous amount of work required (Johnson, 1970; Lawler, 1977; Palmer, 1975; Schlegel, 1978), and there has been some speculation that the reason interdisciplinary courses and programs die is that the work and effort involved take their toll, with those involved becoming "burned out."

The literature not only favors the thematic or problem-centered

organization, as opposed to the chronological, but it also emphasizes the need for a reflective or "process-oriented" approach to the subject matter in place of the traditional orientation toward facts (Friedman, 1969; Heitzman, 1974; Hosen, 1975; Waller, 1975). Following the lead of Fenton and his "inductive-inquiry" process designed to stress concepts rather than specifics in secondary social studies classrooms (1971), spokespersons dealing with the community colleges recommend that concepts and major generalizations can best be learned through involving students in the learning process. Such activities as group discussions, student projects, and simulations, games, and exercises to increase and encourage student involvement are recommended. Other writers (Cassano, 1975; Garrett, 1973) urge the incorporation of a practicum or student volunteer component into social science courses.

A cautionary note is sounded by several writers--Handleman, 1975 and 1976; and Winthrop, 1974, among others--who see that the overuse or misuse of some of these innovations is detrimental to substantive learning. They feel that while innovative methods may be helpful in achieving recognized levels of attainment, they are also used to amuse, to entertain, and even more dangerous, "to allow students to think they are learning when they really are not" (Handleman, p. 17, 1975).

In order to individualize instruction, social science instructors are involved in a limited amount of experimentation. Anderson (1969) details the development of an audio-tutorial system; Hobart and associates (1973) discuss their experiment with small group peer instruction, and Ludwig (1975) reports on the successful use of a modified version of PSI. In general, however, the literature indicates that the dominant mode of instruction is the lecture method.

Other Interdisciplinary Courses

The preceding discussion has been directed primarily to the introductory or general social science course, but a number of courses and programs on more specialized topics also use an interdisciplinary approach. Gerontology courses frequently incorporate a number of different

disciplines in an attempt to present a holistic picture of aging in our society. The growing body of literature on gerontology courses parallels the increased recognition of the size and importance of the over-fifty population in our country. It also points to the role that the two-year college can play in implementing direct programs for this population, as well as programs that train professionals and paraprofessionals to work with the elderly (Korim, 1974; Tamburello, 1976).

In 1974 "about one out of three community and junior colleges offered some gerontology courses" (Sargent, 1976, p. 9) but only a few institutions offer formal programs in gerontology. The fact that varied departments offer social gerontology courses--biology, psychology, sociology, nursing, and health--both reflects and accentuates the interdisciplinary approach to the area. Under ideal conditions ". . . the development of an associate degree curriculum to prepare parageront ologists would be desirable. Such a curriculum should be geared specifically to preparing a student in the skills, knowledge and orientation needed to effectively render services to the aging" (Korim, 1974, p. 36). For most institutions, however, both Korim (1974) and Tamburello (1976) suggest that instructional material on gerontology be added to existing programs and/or courses be devised that fit into existing departments but are interdisciplinary in nature, such as the course, offered by several community colleges, emphasizing "Aging in Contemporary Society " (the course outline is given on pp. 124-126 of Korim's book).

Courses on death and dying are sometimes linked in both subject matter and title (for example, Psychology of Aging and Death) with a class in gerontology. More frequently, they are offered as separate courses. While there is a growing body of materials on this topic for four-year colleges and universities, the fact that our own intensive review of the literature located only one article directed specifically to the community college (Gurfield, 1977) would seem to indicate that there is a gap between the increased interest in this field and the dissemination of classroom methods and procedures.

Courses on the environment are also utilizing an interdisciplinary

social science perspective. The literature highlights the approach that satisfies general education requirements and that examines man in relationship to his environment (McCabe, 1971). The best example of this method is the Man and Environment course developed by Miami Dade for instructional television with the cooperation and assistance of 22 other community colleges. This two-semester course, specifically designed to fulfill general education requirements, consists of thirty half-hour documentaries on social themes. The modular format allows colleges to adapt the course to their own needs and purposes. Similar to Miami Dade's course is a program entitled Human Ecology and Environmental Planning, which was instituted by Cabrillo Colleges (California). Built on the disciplines of geography, history and ecology, this program is also designed to fulfill general education requirements (Pratt, 1971).

An extremely ambitious interdisciplinary program whose central theme, "The World Food Crisis," is highly interwoven with environmental issues, was instituted at Mendocino College (California) (Wallen & MacMillan, 1976). This program was directed at two groups of students--the liberal arts student seeking a broad understanding of contemporary social issues and members of the "back to the earth" movement. Many members of the latter are in the college's service area and needed help in developing the practical skills necessary to sustain themselves on their single family farms. The curriculum was built on sixteen knowledge goals, and the courses that were developed to meet these goals served as an entire two-year program.

Two environmental programs that rely heavily on their particular setting are Oakton College's environmental geography course, which focuses on Chicago and the relationship of the industrialized society to a natural region (Butzek & Carr, 1976), and Lee Junior College's (Kentucky) environmental course focusing on Southern Appalachia (Pratt, 1971). Both courses are part of a larger general education curriculum and both utilize the interdisciplinary approach to emphasize the relationship of a particular natural environment on humans and their activities.

The literature on women and ethnic groups concerns itself with the rationale and procedures for such courses. Courses on ethnic minorities are designed to enhance the minority student's self-concept and to allow students of all backgrounds to become more knowledgeable about the varied cultural heritage of our country (Carranza, 1976). The value of the interdisciplinary approach is that it highlights the interdependence of the minority's historical experience (Bryant, 1975; Foley, 1977; Juarez, 1977). Not surprisingly, proponents of interdisciplinary women's courses use the same rationale (Benson, 1972; Nordh, 1972). Spokespersons for both types of courses also feel that "the multidisciplinary approach is a tool that lends itself readily to purposes of corrective scholarship" (Hursey, 1977, p. 37) and there is a strong consensus that such scholarship is definitely needed (Benson, 1972; Bryant, 1975; Cheeves, 1970; Davis, 1971; Juarez, 1977; Roessel, 1971).

The issue of single versus team teaching arises here just as it does in the literature on the survey or introductory course. The team technique seems to be generally preferred since a single instructor can rarely provide multiple perspectives and the team offers a model of faculty as colleagues, not competitors. The problems of integrating materials, agreement on goals for the course, and resources and funds in team teaching are, however, recognized (Bryant, 1975; Hursey, 1977). Most writers also concur on the need for such courses to be academically sound and to meet the standards of other social science courses. Writers, describing the situation in the early 1970s, propose the cross-indexing of courses oriented to minority groups or women with courses that already exist in the curriculum as a means to gain academic credibility for these new courses (Cheeves, 1970; Lombardi, 1971). The need for such an approach seems to have declined as the more recent literature does not mention it and the Center's data did not reveal much cross-indexing.

There is a noticeable paucity of articles and reports in some of the specialized areas. Courses on urban planning and on social science methods receive scant attention in the literature. Discussions of courses that do focus on urban planning--such as the course at Wilbur Wright

College on the Des Plaines River in the urban Chicago area (Berry, 1975) and the Bronx Community College Course which conducted an ecological survey of the Bronx (Pratt, 1971)--rely more heavily on the physical than the social sciences.

To summarize, the literature on interdisciplinary social science centers around five main areas of concern. The first is a rationale for the interdisciplinary approach and, in particular, the appropriateness of this approach for the community college. The second is whether one course should serve all students or a separate course be designed for non-transfer students. The third is what constitutes an interdisciplinary course and what is the best method for teaching it--single teacher or a team of teachers. The fourth area examines newer or more innovative approaches to the teaching of such classes versus more traditional approaches. The last area deals with courses on specialized topics and the value that the interdisciplinary social science approach has for such classes.

ANTHROPOLOGY

While anthropologists hail their discipline as the broadest of all within the social sciences and the one that comes closest to the goals of general education (Chilcott, 1976; Johnson, 1976), it has never had a firm or prominent place in the community college curriculum. One of the reasons cited for this is anthropology's lack of popularity with the community college's diverse student population (Brawer, 1976). But even in the early 1960s when two-year colleges catered much more to transfer students, two surveys revealed the limited offerings in anthropology.

In their 1960-61 survey of California's community colleges, Lasker and Nelson (1963) note that the only offerings in anthropology were university parallel courses. The implication of this finding was that limiting anthropology courses to those that were acceptable to University of California and state colleges inhibited the growth of approaches that would appeal to a wider group of students. At the same time

Yeshiva University (1962) analyzed the bulletins of 80 two-year colleges in the Middle States area and observed a marked absence of courses in anthropology. Only seven percent of the curriculum categories offered anthropology as a required limited elective or pure elective subject.

In 1972 Miller (1974) surveyed the chairpersons of social science departments in 219 public community colleges nationwide to ascertain the status of anthropology in two-year colleges. While his findings confirmed Lasker and Nelson's (1963) earlier report that the majority of anthropology offerings in the community colleges parallel what is traditionally offered in universities and four-year institutions, many of the respondents felt that differences existed between the classes in their colleges and those in the senior institutions. It is precisely those differences, discussed through new approaches and orientations in specific courses, around which the literature focuses and with which this report is concerned. It draws mainly from reports on courses in two-year colleges, although some discussion of four-year college course offerings has been included.

Our literature review yielded little in the way of a general discussion of the issues involved in teaching anthropology, nor did it give an overall picture of the state of the discipline. Because it focuses on the innovative and experimental, a caveat is in order. It must be remembered that the courses reported here are the exceptions, not the rule. The very fact that a report on trends or widespread changes is conspicuously absent may indicate that most observers and/or practitioners find little that is worthy of reporting.

In order to encourage more class discussion, decrease the use of lectures, and utilize audio-visual materials, several people discuss methods that they have successfully used. Chalfen's (1976) approach, which he recommends for introductory area courses, utilizes ethnographic films as a means of complementing the ethnographic readings and of calling upon students' experiences in media viewing to begin to develop a knowledge of media communication.

To increase undergraduate involvement in anthropology courses, particularly when fieldwork is not feasible, Ager (1976) recommends four simulations. These include the use of unnarrated films, use of classmates

as informants, use of community members as informants, and analyses of museum artifacts. Ager's approach to films is close to Chalfen's; the films are used in place of field observation and after observing the culture via film, students write ethnographies. Such a method can "develop observational and methodological skills" (Ager, 1976, p. 12). Using classmates as informants on specific assignments encourages class interaction and participation, while the use of carefully selected community informants may increase students' awareness and understanding of various ethnic groups. Analyzing museum artifacts is an excellent way for students to wed anthropological knowledge and methods with a hands-on experience.

At Santa Fe Community College (Florida), McRae (1973) eschewed the standard textbook-lecture-test method and devised a largely media-centered introductory anthropology course. Multi-screen presentations, live demonstrations, audio-tutorial tapes, and a variation on the seminar where students relate or teach a key idea selected from the readings, all supplement, individualize, and make more meaningful the readings. The success of each of the above methods is attested to by student enthusiasm and increased performance.

Several instructors have experimented with individualizing instruction. One method is a multi-track approach to accommodate the great diversity of students in a community college introductory anthropology course (Foster, 1976). After organizing into two categories the basic understanding that students should gain from a beginning course, Foster devised two sets of course objectives and course units that would overcome anthropocentrism and combat ethnocentrism. This approach offered a variety of options tailored to meet the requirements of those students taking the course and not planning to transfer, of those planning to transfer, and/or of those desiring a course with more depth. A second method that is being used is to adopt the PSI or Keller approach to introductory anthropology courses (Moore, 1974; Steffy, 1975; Whitney & Dubbs, 1976). The Personalized System of Instruction (PSI), initially designed for use in psychology courses, has now found its way into courses in many different disciplines. Whitney and Dubbs (1976) modified the PSI plan to fit

anthropological course material and method. Their revisions produced an individualized course that had a series of individual study units on a variety of topics; an optional, individualized, self-paced schedule which allowed students to decide what units would be studied and when they would be completed; all class periods devoted to individual tests, evaluation, counseling, or audio-visual presentations; and a multiple exit plan which enabled students to leave the course when they achieved their desired grade.

At Atlantic Community College (New Jersey), two innovative instructors offered physical anthropology as an accredited lab science course rather than in its usual format as lab exercises and demonstrations appended to a lecture class (Lehavy, 1976). Not only has this change made possible the fulfillment of lab science requirements for graduation with an option other than biology or chemistry, but it has vigorously stimulated student interest in other anthropology courses. Another unique aspect of the course, and perhaps the reason it has become so popular, is the stress placed on the unity within anthropology. "Human genetics, biochemistry, anatomy, physiology, primatology and paleontology are linked together to demonstrate how various biological aspects of mankind have evolved" (p. 44). The course thus shows the interrelation among biological evolution, human culture, and behavior.

At Orange Coast College (California), Merry expanded both the scope of his cultural anthropology course and the number of enrolled students by developing a television course called "Dimensions in Cultures" (Cooper, 1974). Such an endeavor, which involved actually travelling to and filming the cultures to be studied as well as meeting and interviewing outstanding authorities in the field, can only be undertaken with outside financial help (Merry's course was financed by the National Endowment for the Humanities and the Coast Community College District). However, the successful combination of television classes, faculty counseling, and coordinated text assignments and testing is a model that other colleges and districts may want to consider.

In an attempt to incorporate more actual field experience and make the courses more relevant to students, a number of instructors and

institutions have moved their courses out of the classroom and into the field. In 1972 Saad described his course, Anthropology 201: An Experimental Course in Urban Life and Culture, which used the community as the classroom. The primary objective was to help students "develop an awareness and understanding of the nature and diversity of cultural patterns and processes within urban areas " (p. 114). With the emergence of urban anthropology as a field where the concern is "the study of modern man in his contemporary urban environment" (Novick, 1972, p. 22), more anthropology instructors may follow Saad's lead and make the urban community the classroom.

Meanwhile, other instructors are utilizing both local and not so local sites in their efforts to make their courses more relevant. While many community college archaeology field courses require a prerequisite, instructors at Cochise College in Arizona (Myers, 1970), Monroe College in New York (Day, 1975), Norwalk Community College in Connecticut (Brackett & Vlahos, 1977), and Seattle Community College in Washington (Erikson, 1969-70) allow student interest to be the prerequisite. Some of these courses utilize prehistoric Indian sites; others use the more recent past and focus on salvage archaeology. Common to all are the objectives of introducing the scientific method through genuine situations, bringing to "life the interface between archaeological artifacts and human behavior" (Day, 1975, p. 8), and encouraging students to maintain an interest and involvement with archaeological museums and societies after they graduate, regardless of whether or not they pursue further academic studies in anthropology or archaeology.

Field experience, relevancy, and probably a more lasting learning experience have been achieved through a field school for a physical anthropology class (Huggins, 1974); De Anza's College "By the Sea" class in Native American Studies and cultural anthropology (1974); and a class in the history of the Native American, in which students engage in extraneous-to-the-classroom projects that not only expand their own but the general public's understanding as well of the place of the Native American in our history (Lenarcic, 1977). All three courses seem to rely

on creative, challenging, and dedicated instructors whose interest in the subject and in their students unite to form a unique and exciting educational experience.

To summarize, the preceding courses are examples of the ways in which some community college instructors and their institutions are attempting to alter the format of anthropology courses from that used in four-year institutions to ones that are more suitable to the community college and its students. The emphases here are in making the courses more relevant by involving the students in projects, field experience, and their own environment in order to make anthropology more of a living experience; increasing student-teacher interaction by decreasing the traditional lecture format and substituting more class discussion and/or greater individualization of instruction; and in relying more on supplemental or alternative instructional materials--e.g., audiovisual materials.

Again, it is important to remember that these innovations are isolated examples--not the mainstream. Instruction in anthropology courses, on the whole, follows a familiar pattern. What that pattern is will emerge in the next chapter when the data that we have gathered on curriculum trends and instructional practices are presented.

PART II

CURRICULUM AND INSTRUCTION

The study conducted by the Center for the Study of Community Colleges was designed to fill gaps in the literature and to provide a comprehensive view of social science and anthropological education in the two-year college. Through the analysis of college catalogs, a course classification system was developed and data on prerequisites and instructional modes were obtained.* A careful examination of class schedules for the academic year 1977-78 provided curriculum data on the number and kinds of courses actually scheduled; data on teaching methods and instructional practices were obtained from the class section survey.

*For a complete methodological report on the project, see Hill and Mooney (1979).

Although curriculum data are distinct for interdisciplinary social sciences and for anthropology, the class section survey combined these two disciplines in order to obtain a subject pool large enough for analysis. The sample was representative of the number of sections offered among all the science sections for the academic year 1977-78 (anthropology and interdisciplinary comprised 3% of all science sections and they made up 3% of the class sections surveyed). The total number of responses was 31, including 16 anthropology and 15 interdisciplinary social science courses. The discussion on instructional approaches and practices will at times treat the two areas together. The reader will always be appraised as to when the results are only germane to interdisciplinary social sciences or to anthropology and when the discussion refers to both.

Interdisciplinary Courses

Interdisciplinary social science is not as widespread as its proponents might wish. Taking the broad definition of interdisciplinary social science--any course or program that combined two or more social science disciplines, or a social and a biological science, or combined social science areas and humanities with the emphasis on the social sciences--57 percent of our sample listed one or more courses of this type in their college catalogs. But in terms of actually scheduling such a class, only 40 percent of the colleges did so.

Certainly in comparison to Gross and Maynard's study (1965) where only three percent of the 140 college catalogs examined had an integrated social science offering, the interdisciplinary perspective has made enormous inroads into the two-year college social science curriculum. But if one compares this to the great popularity of the integrated natural science course (93% of the sample listed such a course and 89% scheduled one), it seems that the full potential of the interdisciplinary movement has not been reached.

Interdisciplinary social science courses are not dispersed evenly across the country. Over half the institutions located in the West and

Middle States region offered such a course, whereas only one-third of the colleges in the South and less than a quarter of those in the Mountain/ Plains area had such offerings. Also, the number of offerings within an institution seems to vary by region. It is more common for colleges in the West and the South to have multiple interdisciplinary offerings than for those in the other regions. The Northeast stands out particularly in this respect because only one of the five colleges in our sample that offers interdisciplinary social science has more than one offering. Interestingly, that one institution is a technical college with a certificate program in alcohol counseling.

The broad definition of interdisciplinary social science was then broken down into eight categories by course title and content focus. The eight categories were defined as follows:

The interdisciplinary category includes courses and programs that combine two or more special areas of social science (anthropology, psychology, sociology, economics, history, political science and geography) or occasionally combine a social science and a biological science, i.e., biology or ecology, or combine the social sciences and humanities. These courses and programs deal with some aspect of the past, present and future activities, institutions, and behavior of humans. Unless otherwise stated, such courses and programs serve as an introduction or survey to the social science disciplines for general education students or students entering career programs.

Introductory or Survey Course
Environmental
Aging
Special Groups
Social Research
Thanatology
Urban Planning
Other

(For a complete description of each of the above subcategories, see Appendix B)

General/Introductory Courses

Not surprisingly, a general or introductory class is most frequently offered, probably because it is so often included as part of the offerings under general education. The general education component of these courses is underscored by the prevailing emphasis on the American experience and American institutions. These courses are designed primarily as a first level course, and only rarely (13%) by catalog description and never by the response of the instructors in the course section survey is there a prerequisite to them. The literature is congruent with our findings from both the above methods of determining course sequence or linearity since the issue of prerequisites simply does not arise.

Interestingly, while Gross and Maynard (1965) found that the titles "Social Studies" and "Social Science" were used interchangeably, our analysis showed that the term "Social Studies" has almost disappeared from the catalogs of community colleges. Within our classification scheme, only three courses were designated as social studies and two of these were decidedly other than college level courses--one a GED and the other a Basic Education. The reason for this shift is not apparent from the data. It is possible that this change has occurred because community college instructors have clarified and more carefully defined the content of their courses, thus setting them apart from social studies. A second possibility is that community college instructors have arrived at a philosophical position and have established instructional goals that are consonant with the purpose and methods of social scientists (Barth & Shermis, 1970). But a more likely explanation is that as community colleges have moved away from the K-12 system and increasingly become identified with the post-secondary sector, a corresponding movement has taken place within academic areas. The social studies have been defined as the social sciences simplified for pedagogical purposes (Wesley & Wronski, 1964). Small wonder, then, that community college instructors and departments, in their efforts to move away from their secondary roots, would also like to disassociate themselves from this less academic endeavor and become affiliated with the social sciences.

Although by definition all these general or introductory social science courses were interdisciplinary, it is interesting to see the variation that exists in terms of actual definition and practices among instructors. A few instructors answered negatively to the question: Was this class conducted as an interdisciplinary class? Of those who answered affirmatively, all listed other disciplines that were included. However, when queried in what ways instructors from other disciplines were involved, the most frequent way was through course planning and the least frequent was by team teaching. It would appear, then, that there is no one way by which interdisciplinary courses are in practice either defined or taught. Consequently, the debate in the literature over single teacher versus team teaching reflects the lack of consensus among the practitioners.

The next most popular course category, both in terms of inclusion in the catalog and actually being offered, is gerontology or aging. Some 40 courses were listed in the class schedules and of these 28 percent had a prerequisite. The prerequisites varied from another interdisciplinary social science course to instructor's permission, with the majority requiring an introductory psychology or sociology course. Courses in gerontology were offered through a large number of departments and from a variety of perspectives. They were listed most often under psychology, but they were also included in such departments as health, nursing, philosophy, biology, and social work.

As Table 1 indicates, the other categories are all close together, both in terms of the number of colleges that list them in the catalog and schedule and as a percent of total social science courses (Column 3). Not surprisingly, except for the category, "Other," a higher percentage of all the special topics courses require a prerequisite when compared to the introductory or survey courses.

Anthropology

Anthropology is more commonly found in the community college than is interdisciplinary social science. Of the colleges in our sample, 63 percent listed one or more anthropology courses in the college catalog, and

Table 1

Interdisciplinary Social Sciences in the Two-Year Colleges,
1977-78 Academic Year

Type of Course	Percent of Colleges Listing This Type Course in Catalog (n=175)	Percent of Colleges Listing This Type Course in Class Schedule (n=175)	Percent of Total Int. Soc. Sci. Courses Listed on Schedule (n=168)	Percent of Total Int. Social Science Sections Listed on Schedule (n=587)		Percent of This Type Course Having a Prerequisite
				Lecture	Laboratory	
Social Science (Survey)	26	17	26	51		13
Environmental	10	7	9	10		33
Aging	24	16	24	13		28
Special Groups	9	6	10	5		24
Social Research	8	3	3	2		40
Thanatology	13	9	11	6		17
Urban Planning	9	5	6	3		20
Other	13	8	11	9		11

Note. 1. 100 colleges (57% of sample) list one or more interdisciplinary social science courses in the college catalog.

2. 70 colleges (40% of sample) list one or more interdisciplinary social science courses in schedules of classes.

54 percent had one or more in their schedule of classes.

Although the pattern is different, there is also considerable variation by region in the institutions offering anthropology courses. All the institutions in the West offer one or more anthropology courses, and nearly two-thirds of the colleges in the Middle States region offer at least one course. But there are four times as many offerings in the colleges in the West as in those located in the Middle States. Half the schools in the Midwest and the Northeast and a third of those in the South offer anthropology; but while schools in the South and Midwest tend to have more than one type of course, those in the Northeast do not.

Anthropology was then further subdivided into seven categories in terms of course content. The category includes courses and programs dealing with the study of the physical, social and cultural origins of man. The discipline focuses on the interrelationship of the natural and social environment as it relates to behavior patterns, social institutions, language, and beliefs among different cultures. The categories are physical, cultural, prehistory and archaeology, Indian and Native American, specialized cultural, and specialized topics. Unless otherwise stated, these courses are designed for students who wish to fulfill a general education requirement and for students who wish to pursue a program in anthropology or another social science.

Introductory-General
Physical Anthropology
Cultural Anthropology
Archaeology/Prehistory
Indian and Native American
Specialized Cultural
Other

(For a more complete description of each of the above subcategories, see Appendix B)

The type of course most frequently listed and actually offered was cultural anthropology. Within this type, 16 percent had a prerequisite that was generally another course within the discipline. While the next most frequent offering within the catalogs was the introductory or general course, it was superseded by both archaeology and specialized

cultural anthropology as a percentage of the total anthropology courses listed in the schedule. However, it must be pointed out that the inconsistency in those percentages, as well as the inconsistency in physical anthropology, may be a result of the small numbers that are here involved.

As Table 2 indicates, the percentage of courses in archaeology and specialized cultural anthropology that require a prerequisite is fairly high--39 percent for the former; 29 percent for the latter. Instructors' permission, another course within anthropology, and another part in the same course sequence were the prerequisites in archaeology. In specialized cultural anthropology the most frequent prerequisite was another anthropology course.

Our literature search revealed only one study that examined the types of anthropology courses offered in the community college: this study was Miller's survey of social science chairmen (1974). While the methodologies of Miller's study and our own project are in no way comparable, it is interesting to note the differences in the findings. Miller's results, based on a questionnaire sent in 1972 to 219 community colleges nationwide, had a response rate of 48 percent, which leaves some question about the nonresponding institutions. In the 105 colleges that did respond, 80 percent offered some anthropology. The most frequent offering was the introductory level course, followed by cultural anthropology and a course on North American Indians. When queried as to where they planned to expand their offerings, those colleges that had such plans indicated expansion in courses dealing with cultures, courses on North American Indians, and courses in archaeological methods. If these projected areas of expansion have, in fact, been realized over the past five years, they may shed some light on our own findings, which indicated more courses scheduled in cultural anthropology followed by courses in archaeology and specialized cultural anthropology.

Our study also revealed that the type of anthropology courses offered varies by region. Courses in the colleges in the North East are limited to the introductory general course and introductory cultural; there are no courses on physical anthropology, archaeology, and Indian/Native Americans in any of the 11 colleges within our sample in this region.

Table 2

Anthropology in the Two-Year Colleges, 1977-78 Academic Year

Type of Course	Percent of Colleges Listing This Type Course in Catalog (n=175)	Percent of Colleges Listing This Type Course in Class Schedule (n=175)	Percent of Total Anthropology Courses Listed on Schedule (n=298)	Percent of Total Anthropology Sections Listed on Schedule (n=890) Lecture	Laboratory	Percent of This Type Course Having a Prerequisite
Introductory-General	30	25	14	18		5
Physical	26	22	15	22		11
Cultural	43	37	24	32		16
Archaeology/Prehistory	23	15	18	12		39
Indian & Native American	15	10	9	5		12
Specialized Cultural	24	16	18	9		29
Other	6	2	2	1		33

Note. 1. 110 colleges (63% of sample) list one or more anthropology courses in the college catalog.

2. 95 colleges (54% of sample) list one or more anthropology courses in schedules of classes.

Courses in archaeology and Indian/Native Americans are typically offered in the West.

A caveat about offerings in the community college curriculum in general and in anthropology in particular is in order here. Regardless of what the catalog states in terms of suggested curricula or course sequence and in spite of the classes and sections listed in the schedule, it is the number of students who appear in the class that actually determines what the community college offers. Transfer students, who only a decade ago comprised 29 percent of the student population (Medsker, 1969), are now an even smaller contingency. What the decline of the transfer group means in terms of the curriculum is that there are fewer required courses and fewer students taking a prescribed program. The net result is that students sign up, perhaps appear once or twice to sample the offering, and then disappear--a pattern occurring semester after semester, quarter after quarter. Our survey figures reveal how this pattern affects a discipline such as anthropology. Sixteen instructors to whom the course section survey was sent did return them, but four other sections were cancelled, a cancellation rate considerably higher than that of the other science disciplines included in our study.

Before concluding this section on curriculum, note should be made of the differences that were observed on course offerings by institutional size and type of control--public or private. Our analysis shows that while colleges with a student population of under 1,500 do not generally offer either anthropology or interdisciplinary social science, more offer the former (35%) than the latter (14%). Both course types are found in nearly all the institutions with a student population of over 7,500. Interdisciplinary social science is offered in half the schools with a student enrollment of 1,500 to 7,499, and anthropology is offered in 62 percent of these medium sized institutions. Less than one-fifth of the private institutions have offerings in either discipline, while 45 percent of public colleges offer interdisciplinary social science and 61 percent offer anthropology. Both disciplines are rarely found in colleges in rural areas. The public comprehensive colleges, located in

urban or suburban areas with a student population of over 1,500, have the capability of offering a more diversified social science curriculum and thus include classes in anthropology and interdisciplinary social science.

INSTRUCTION

The class section survey provided the data on instructional practices in anthropology and interdisciplinary social science classes in two-year institutions (see Appendix C for a copy of the class section survey). A questionnaire was sent to the instructor of every 13th section offered within these disciplines in Fall 1977. From the responses a cohesive body of information on course goals, course requirements, student achievement criteria, and instructional practices and materials was obtained.

Faculty Characteristics

What does the faculty look like? Our survey reveals a profile of anthropology and interdisciplinary social science instructors. They tend to have taught three years or more and their highest degree tends to be the master's (88% in anthropology and 80% in social science). Of the interdisciplinary social science sections surveyed 87 percent were taught by full-timers. As discussed earlier, the interdisciplinary approach does demand more time and effort and requires flexibility on the part of an instructor. Full-timers would more likely be able to invest the time since so many part-timers have full-time jobs outside the college (in California, 77%, Sewall et al., 1976). In addition, experienced teachers may feel more secure in their role and thus be not only more willing to experiment and innovate, but have the flexiblity to do so. Twenty-five percent of the anthropology sections surveyed were taught by part-timers compared to 16 percent of the total science sections. The number of sections taught by part-timers is remarkably close to Brawer's finding (1976) that 24 percent of the instructors in cultural anthropology taught 4-6 hours.

Students

Anthropology classes tend to be slightly larger than those in interdisciplinary social science; initial class enrollment was 31 in the former and 27 in the latter. While the average initial class enrollment in all the science surveyed was 31, economics, sociology, and psychology were larger--35, 35, and 39 respectively. Both anthropology and interdisciplinary social science classes had an 81 percent average rate of completion, in comparison to a 79 percent completion rate for all science courses. The 81 percent rate is comparable to that of the three other social science disciplines.

In terms of class composition, there was only a small difference between the number of females and males enrolled, with females being slightly higher. This class ratio is very similar to another social science discipline, sociology, and to integrated science. Females again were slightly higher than males in their completion of such courses.

RESULTS

From the class section survey, it was found that both interdisciplinary social science instructors and anthropology instructors feel their course is primarily a lower division college parallel course; two-thirds of each group felt that the course was designed for the non-science transfer student and for adults who desire further education. These responses are very much in line with those of instructors in psychology and sociology.

Course Objectives

A majority of faculty in both areas see the relationship of science to society as the primary focus of their course. Sixty percent of the social science instructors and 75 percent of those in anthropology desire that their students "understand/appreciate inter-relationship of science and technology with society," and 73 percent of the former and 50 percent of the latter want their students to achieve the ability to "relate knowledge acquired in class to real world systems." Both disciplines

had a few instructors who desired students to achieve an understanding of problem-solving techniques and to understand the specific principles, concepts, and terminology of the discipline. Instructors within each discipline were fairly evenly divided in their choice of "understanding self" and developing "the ability to think critically" as their major goal for the particular class. While their concern for students to "understand self" placed them close to their fellow social scientists in sociology and psychology, it clearly separated them from all the other disciplines that minimized the importance of this objective.

Classroom Activities

Both disciplines utilize the lecture format as the dominant mode of instruction. The only major exception to the use of lectures is in the archaeology/prehistory courses. Within this category 41 percent of the course descriptions in the college catalogs indicated that the class had both lectures and field work.

The course section survey provided a more detailed breakdown of the type of classroom activities and the time allotted to them. The instructors within both areas rely primarily on their own lectures, but, in addition, classtime is spent on a variety of other instructional approaches. In fact, both types of courses are distinguished from those in the other disciplines by their use of guest lectures, student presentations, film or taped media, and field trips. The use of such activities with interdisciplinary social science classes is a strong indication that many of the ideas articulated in the literature are translated into actual classroom practice.

More interdisciplinary social science instructors (53%) use guest lecturers than any other group. However, since some of these instructors reported that teachers from other disciplines were involved in making the course an interdisciplinary effort by offering guest lectures, this may account for the relatively high usage of this instructional variation. A very high percentage of social science instructors (80%) spent a portion of class time on student verbal presentations. This activity

again separates them from their anthropology counterparts (only 30% used student presentations) and from instructors in all the other disciplines. The use of student presentations corresponds with the recommendations of Friedman (1969), Heitzman (1974), and Waller (1975), among others, that interdisciplinary social science courses employ activities that encourage involvement and that stress a process orientation toward course material rather than fact orientation. Class discussions are used by instructors in both disciplines but neither this activity nor the amount of class time spent on it distinguishes these two areas from the other disciplines included in the study.

The number of instructors who used taped media or film and, particularly, the amount of class time spent on these forms was distinctive to both areas. Twenty or more percent of class time was spent on this activity by 20 percent of the social science sections surveyed and by 38 percent of the anthropology; both of these time allotments were considerably higher than any of the other disciplines.

When the type of media and the frequency of use are examined, some interesting differences appear between the two disciplines. In anthropology courses, the most frequently used instructional media were: (1) film; (2) slides; (3) audiotapes/cassettes, records and videotapes; and (4) overhead transparencies. For social science, the order was (1) film; (2) videotapes; (3) overhead transparencies; (4) audiotapes/cassettes/records; and (5) slides. While it is true that almost all instructors in both disciplines utilize film (only two in each did not), anthropology instructors are much more likely to use it "frequently," whereas social science instructors tend to use it "occasionally." The only media used as "frequently" by both was overhead transparencies. The use of videotapes was also equal since all instructors marked "occasionally."

Cantor (1978), commenting on interdisciplinary humanities courses, noted that a factor common to all was that they were highly mediated. While interdisciplinary social science classes share this characteristic, they do not use media to the same extent as anthropology classes. Thus the anthropology literature describing the use of film and other media

as alternatives to actual field work and as a means of making the course more alive to students (Ager, 1976; Chalfen, 1976; McRae, 1973) should perhaps be seen not as a call to utilize innovative techniques but rather as a reflection of actual classroom practice.

Field trips were utilized by 20 percent of the social science sections and by 25 percent of the anthropology sections. Employing this activity put them close to the earth/space and integrated science disciplines but in contrast to the other social science disciplines where field trips were used very minimally.

Also of interest is the fact that 20 percent of the interdisciplinary social science and 25 percent of the anthropology instructors do not use quizzes and exams at all. The only other discipline that comes close in their eschewing of tests is engineering. It is reasonable to assume that in engineering courses problems and lab work would be used as an alternative means of evaluating student progress. However, neither of these alternatives is used in the courses under discussion.

Grading

This brings up the question of what emphasis in terms of grades is given to various kinds of student activities. As a group, instructors from both disciplines include papers written outside of class; essay exams; field reports; oral work, including participation in class discussion; and research reports to a greater extent than instructors in all other disciplines--except in sociology and psychology--in determining grades. On the other hand, quick-score objective tests and homework are not included, which again sets them apart from the instructors in most other disciplines. A composite picture suggests that instructors in these courses emphasize written and short answer exercises. This concern for written and oral work may be related to the involvement of these courses (particularly interdisciplinary social science) in the general education framework, or it may have to do with the value that social scientists in general place on these basic skills.

What do instructors look for in evaluating students' exams and

work? Again for both groups, an acquaintance with the concepts of the discipline is of primary importance, followed by ability to synthesize course content and relationship of concepts to students' own values. While the high degree of importance attached to the latter was unique to these instructors, and to those in sociology and psychology, this definitely corresponds to their desire to have students "understand self" as the major goal for their class. Less value was assigned to mastery of a skill and the recall of specific information.

When queried as to the type of exam most frequently given, two-thirds of the instructors in both areas frequently used essay form while only 10 percent never did so. These responses separated them from the instructors in all the other disciplines, but they are congruent with the emphasis placed on activities utilizing writing skills. Only half of them used multiple response frequently, and nearly a third never used this exam type. Their reliance on multiple response exams was considerably less than that of their fellow social scientists. Nothing in the grading practices of these activities is distinctive; almost 90 percent depend on the traditional letter grade.

Instructional Materials

In addition to textbooks, faculty in anthropology and interdisciplinary social science use a variety of instructional materials, including collections of readings, journals and magazines, newspapers, and syllabi or other handouts. Interdisciplinary social science instructors are distinguished by the highest use of journals or magazines (73%) among instructors of all disciplines and also by their reliance on newspapers. Since two-thirds of the instructors stated that they were well satisfied with the textbooks, the use of more topical material appears to be supplemental, and perhaps related to these instructors' concerns for relating science both to society and to real world problems. While fewer anthropology instructors declare themselves "well satisfied" with their texts, they are unique (particularly among their social science counterparts) in having a total say in choosing the texts. This same finding is reported

by Brawer (1976) in the survey of cultural anthropology instructors.

Out-of-Class Activities

A number of out-of-class activities are either required or recommended more frequently in anthropology and interdisciplinary social science courses than in classes in most other disciplines. These activities include on-campus educational films, other films, television programs, museums/exhibits, and outside lectures. While these activities are sometimes required for social science classes, they are usually only recommended for anthropology classes. This interest in expanding the learning experience beyond the confines of the classroom meshes with the major course objectives to interrelate science and society and science and real world problems. Furthermore, it underscores much of the literature, which takes the position that only by extending the learning experience to out-of-class situations will it be meaningful, and then goes on to relate ways in which instructors are doing just that.

Course Improvement

The extensive use of media in anthropology courses discussed previously shows up again, but in a somewhat different light, when instructors were asked what would make their course better. Some 80 percent of those in anthropology felt that the availability of more media or instructional materials would improve their class; this is higher than any other group of instructors. Among interdisciplinary social science instructors, nearly 50 percent felt that this would help make their course better.

Interdisciplinary teachers feel that their courses would be better if their classes were smaller, if they had more release time to work on the class, and if their students were better prepared. Anthropology instructors rarely feel smaller classes would be beneficial, but instructors in the other social science disciplines agree with their interdisciplinary colleagues. Examining this response by course type, we found that it is mainly the introductory or survey courses designed

for general education requirements that instructors would like to see smaller--not those on more specialized topics.

Many instructors in all the disciplines surveyed felt that their courses would be improved if they were given more release time to work on and develop the course. Close to half of the anthropology instructors checked this item. But the fact that 60 percent of interdisciplinary social science instructors cite this as a need supports the literature, which stresses the extra time required to develop and prepare interdisciplinary offerings.

The desire for better student preparation is not unique to this faculty group. In fact, 60 percent of the anthropology instructors share it as well as half of the entire faculty surveyed. Concern with student preparation is almost endemic to the teaching profession at all levels, and certainly this concern is not new to the community college scene. However, in the case of anthropology courses, this concern may stem from a somewhat different cause. While the perspectives of many social science disciplines are touched upon in high school classes and have--albeit in a popularized way--become part of the pervasive culture, this is not true of anthropology. Thus this response on the part of this group of teachers may reflect not only their concern with the students' basic skills but a unique concern over the students' unfamiliarity with anthropological concepts and theories. While they are concerned, none of them see stricter prerequisites as a means of solving the problem of student preparation. Such an attitude sharply contrasts with that of their social science colleagues. Over one quarter of the interdisciplinary instructors feel that stricter prerequisites would make their course better and approximately a quarter of the economics, sociology, and psychology instructors concur.

Both anthropology and interdisciplinary social science instructors are distinctive in that none of them desire more freedom to choose materials and only one respondent felt that administrative interference should be decreased. In short, these courses seem to be offered in institutions in which instructors have sufficient autonomy in their

work and with the exception of student preparation and more release time are able to control many aspects of their work environment.

In Sum

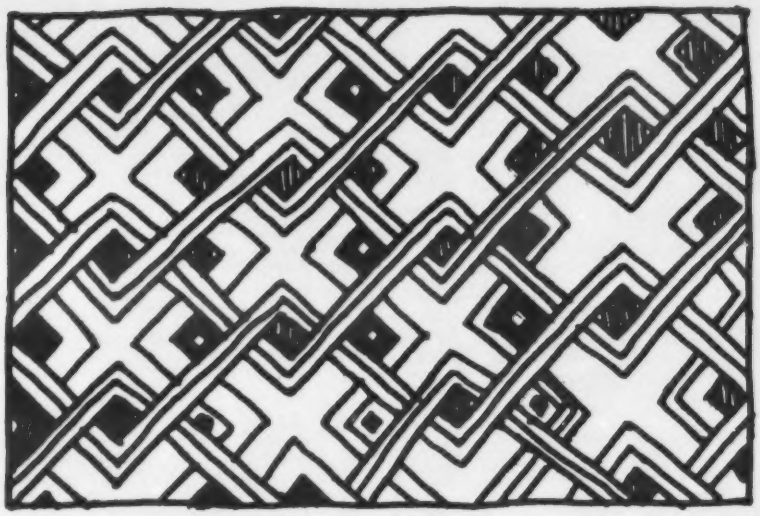
The following summarizes the major findings on the two disciplines and fills some of the gaps in the literature. Anthropology courses are more frequently listed and scheduled in community colleges than are interdisciplinary social science courses. Course offerings of both types are not as widespread as either courses in the other social science disciplines included in the study--economics, psychology, and sociology--or as interdisciplinary science courses. Almost without exception such courses are only found in medium or large comprehensive public colleges located in urban and suburban areas. The introductory or survey course is the most frequent offering within interdisciplinary social science; however, within anthropology, it is the cultural survey course that is more prevalent--not the general introductory course surveying the entire discipline. Except for some of the more specialized courses, such as archaeology, specialized cultural anthropology, gerontology, and thanatology, prerequisites are rare.

Courses were defined as interdisciplinary because the content involved several disciplines within the social sciences or social science and humanities or social science and physical science. Interestingly, the instructors of such courses did not always regard them as interdisciplinary, and those courses that were so considered were conducted in several different ways. Some did not involve other teachers; some only used other teachers in course planning or as guest lecturers; only rarely was a course team taught. Thus the debate in the literature on interdisciplinary courses and how they should be taught reflects the many orientations of those teaching them.

Many of the goals and methods of general education are translated into active practice by instructors in both areas. Course objectives stress the relationship of their discipline to society and to real world issues. Classes are targeted for transfer and nontransfer students as well as for adults interested in furthering their education.

Instructors utilize activities both in and out of class that involve the student and that stress written and oral skills. Essay tests are used more frequently than short answer tests; papers and research reports are required in many sections; and student discussions and presentations constitute a portion of class time. Texts are frequently supplemented by such materials as journals or newspapers in order to have the course content interface with actual situations and problems, and there is a heavy involvement with instructional media by these instructors.

The instructors in both areas tend to be experienced. Ninety percent have taught over three years and a third of those in anthropology and a fourth in interdisciplinary social science have taught over ten years. Some instructors, particularly those teaching the introductory social science course, would like smaller classes. A number of instructors in both disciplines feel that the students should be better prepared, the release time for course and material preparation is not sufficient, and the availability of media and/or materials is not adequate for their courses. On balance, however, our findings indicate that instructors in these disciplines enjoy a great deal of autonomy in their professional role and are generally satisfied with their courses.



PART III
CONCLUSIONS AND RECOMMENDATIONS

It appears that anthropology retains its separate identity within the community college curriculum. Our data revealed that anthropology is only infrequently included as one of the disciplines that make up an interdisciplinary course. While it is certainly natural for anthropology instructors to want to preserve the integrity of their discipline, it might be advantageous for instructors to explore new instructional approaches. Such approaches could assume a variety of forms, but the major thrust would be to expose a wider group of students to the major concepts and basic perspective of the discipline.

Our current study, plus the earlier study on cultural anthropology (Brawer, 1976), reveal several avenues that are worthy of consideration

and exploration. First, anthropology courses are conspicuously absent from private colleges and from the small public and technical institutions. True, many of these institutions have neither the resources nor the need to institute traditional course offerings in anthropology. But an interdisciplinary social science course that incorporated anthropological concepts and methods would give students in these colleges at least an introduction to the subject. Second, courses or segments of courses could be devised to fit into vocational programs--for example, a unit on death and mourning in various cultures for students in nursing and the allied health programs or a unit on kinship systems among minority cultures for those in police science, gerontology, and community service programs. Third, an effort can be made to move anthropology out of the classroom and into the general public's interest through activities such as community-wide archaeology clubs and field trips, lectures featuring people from the community with particular expertise, and "mini" courses or lectures on cultures of various world areas designed for travellers and others who might have an interest in a particular area.

The final recommendation is directed more to program planners than to individual instructors. There seems to be a return to or a rediscovery of general education as witnessed by the recent programs and proposals at Harvard, Berkeley, Stanford and Cornell. Some of the two-year colleges (Sante Fe and Miami-Dade in Florida) are also resurrecting former general education programs and more colleges may do so in the immediate future. With this renewed interest in common experiences as an educational base, more educational planners should consider the role that anthropology can play in such a program. Anthropology is, after all, the discipline that encompasses many of the integrative assumptions about human populations, past and present, and whose perspective is homocentric, not ethnocentric. These integrative assumptions and a knowledge and insight into others are crucial components of all general education programs.

While the literature and the practitioners present a strong case for the valuable contribution that interdisciplinary social science courses make to the curriculum, a good number of institutions remain unconvinced.

At least it must be assumed that they lack conviction because such courses are not included in their curriculums. It would seem that these courses could be a major asset in schools with a vocational/technical emphasis where the need may be to give students as wide an exposure as possible within a limited time. Yet over half of these institutions have no interdisciplinary social science offerings. Such courses are also rarely found in either private colleges or in colleges with a student population of under 1,500. Administrators and instructors in these institutions may want to examine the benefits of interdisciplinary courses in light of their own needs and resources. For those program planners who are considering ways to institute or to augment their general education component the findings from this study may provide a basis for the inclusion of such courses. The findings bolster the literature by clearly demonstrating that the goals for and the materials used in interdisciplinary social science classes are supportive of general education objectives.

The literature and the findings that have been presented suggest some additional lines of research concerning interdisciplinary social science classes. Such research may provide an even stronger basis on which to sell the interdisciplinary approach. First, while its advocates argue that the interdisciplinary method counteracts the narrowness and over-specialization of the disciplinary approach, further investigation is needed on how best to characterize the interdisciplinary influence and how to further extend it. Second, more comprehensive studies on student response to and achievement in interdisciplinary social science courses are needed. Lastly, since it is full-time equivalent students that speak most loudly in curriculum decisions, enrollment trends in these courses need to be studied. In particular, such research should address the double-edged question: Do interdisciplinary courses generate their own enrollments or do they cannibalize enrollments from traditional disciplinary courses? The answer to this question could be crucial in determining the future of not just interdisciplinary social science courses but of all interdisciplinary courses.

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*A number in parentheses, preceded by "ED," refers to an Educational Resources Information Center (ERIC) document available from the ERIC Document Reproduction Service, Box 190, Arlington, Virginia 22210, or viewed in any library that has the ERIC collection.

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APPENDIX A

Region 1 NORTHEAST

Connecticut

Greater Hartford
Mitchell Quinebaug

Massachusetts

Bay Path
Bunker Hill
Mt. Wachusett

Maine

University of Maine/
Augusta

New Hampshire

New Hampshire Tech.
White Pines

New York

Cayuga County
Genesee
Hudson Valley
North Country

Vermont

Champalin
Vermont Col. of
Norwich U.

Region 2 MIDDLE STATES

Delaware

Delaware Tech. and C.C./
Terry Campus
Goldey Beacom

Maryland

Dundalk
Hagerstown
Harford
Howard
Villa Julie

New Jersey

Atlantic
Middlesex County

Pennsylvania

Allegheny County/Boyce Campus
Delaware County
Harcum
Keystone
Northampton County
Northeastern Christian

West Virginia

West Virginia Northern
Potomac State

Region 3 SOUTH

Alabama

James Faulkner State
John C. Calhoun State
Lurleen B. Wallace State
Northwest Alabama State

Arkansas

Central Baptist
Mississippi County
Westark

Florida

Brevard
Edison
Florida
Palm Beach
Seminole
Valencia

Georgia

Atlanta
Bainbridge
Clayton
Floyd
Georgia Military
Middle Georgia
South Georgia

Kentucky

Southeast

Mississippi

Itawamba
Mary Holmes
Mississippi Gulf Coast/
Jefferson Davis Campus
Pearl River
Southwest Mississippi
Wood

North Carolina

Chowan College
Coastal Carolina
Edgecombe Tech.
Halifax City Tech.
Lenoir
Richmond Tech.
Roanoke-Chowan Tech.
Wake Tech.

South Carolina

Greenville Tech.
Univ. of South Carolina/
Lancaster

Tennessee

Jackson State
Martin
Morristown
Shelby State

Texas

Angelina
Lamar University/Orange Branch
San Antonio
Vernon Regional
Weatherford

Virginia

Central Va.
Northern Va./Alexandria
New River
Southern Seminary
Tidewater
Thomas Nelson
Wytheville

Region 4 MIDWEST

Illinois

Central YMCA
Danville
Highland
Kishwaukee
Lincoln Land
Oakton
Waubonsee
William Rainey Harper

Iowa

Clinton
Hawkeye Institute of Technology
Indian Hills
Iowa Lakes
Marshalltown
Southeastern

Michigan

Bay de Noc
Delta
Kalamazoo Valley
Kirtland
Monroe County
Oakland
Suomi

Minnesota

Austin
North Hennepin
Northland
University of Minnesota Tech.
Willmar

Missouri

St. Paul's
Three Rivers

Nebraska

Metropolitan Tech.
Platte Tech.

Ohio

Edison State
Loraine County
Northwest Tech.
Shawnee State
Sinclair
University of Toledo
Comm. and Tech.

Wisconsin

District One Tech.
Lakeshore Tech.
Milwaukee Area Tech.
University Center System/
Sheboygan
Western Wisconsin Tech.

Region 5: MOUNTAIN PLAIN

Colorado

Arapahoe
Community College of Denver
Auraria Campus
Morgan
Northeastern

Kansas

Barton County
Central
Coffeyville
Hesston
St. John's

Montana

Miles

North Dakota

North Dakota St. Sch. of Science

Oklahoma

Connors State
Hillsdale Free Will Baptist
Northern Oklahoma
South Oklahoma City
St. Gregory's

South Dakota

Presentation

Utah

College of Eastern Utah
Utah Tech.

Wyoming

Central Wyoming

Region 6 WEST

Alaska

Ketchikan

Arizona

Cochise
Pima

California

American River
Butte
Citrus
College of San Mateo
College of the Desert
College of the Sequoias
Fresno City College
Hartnell
Lassen
Los Angeles Pierce
Mendocino
Merced
Mt. San Jacinto
Saddleback
San Bernardino Valley
San Diego Mesa
Santa Rosa

Nevada

Clark County

Oregon

Chemeketa
Mt. Hood
Umpqua

Washington

Green River
Lower Columbia
Peninsula
South Seattle

APPENDIX B

DESCRIPTIONS OF EACH OF THE CATEGORIES

INTERDISCIPLINARY SOCIAL SCIENCE

SOCIAL SCIENCE (SURVEY)

A study of man in the modern world employing a conceptual approach that utilizes topics from the various social science disciplines. The major emphasis is on the American experience and American institutions. The format varies from a single course to a two or three course sequence most frequently offered under the heading Social Sciences. Such courses are also offered under Basic Education and GED.

ENVIRONMENTAL

A study of the basic concepts in human, cultural, and social ecology. Courses cover such topics as populations, communities, ecosystems, resource utilization and modeling, regulatory mechanisms in ecosystems and the consequences of their disturbances.

AGING

A study of aging offered by many different departments and from a variety of perspectives. Among these are psychology, sociology, biology, nursing, and human services. Topics include the physical, psychological, emotional, and role changes involved in the aging process; issues relevant to older adults such as economics, housing, legislation, community resources, etc., and resocialization techniques needed to help the older adults deal with changes that accompany senescence.

SPECIAL GROUPS

A study of special groups, such as ethnic minorities, women, and the physically handicapped. The interdisciplinary approach provides several perspectives from which to examine how the group views itself, problems that are unique to the group, and the relationship and interaction between the particular group and other segments of the society.

SOCIAL RESEARCH

The study of the methods and procedures of research that are appropriate to social science. Courses include research design, interpretation of data, and applications of social research.

THANATOLOGY

A study of death and dying offered from the perspective of a number of different disciplines. Topics covered in these courses are: perception of death in Western society in comparison with perceptions from other societies, learned attitudes towards death, euthanasia, social rituals and taboos, the grief process, children and death, and personal examination of feelings and attitudes about death and the dying.

URBAN PLANNING

A study of urban growth, planning problems, and solutions. Topics include historical background on American cities; the dynamics of land use and city planning; and the problems of urban life: population, race and poverty, transportation, housing, education, financing, and government.

OTHER

Includes courses not easily placed above such as social science for agriculture majors, regional studies, human sexuality, human factors and safety, alcoholism, and the future of man and America.

ANTHROPOLOGY

INTRODUCTORY-GENERAL

This category includes those courses that introduce the study of anthropology as a field. The basic principles and topics from physical anthropology, cultural anthropology, archaeology, and ethnology are presented to give students an integrated overview of various subdisciplines within anthropology.

PHYSICAL ANTHROPOLOGY

The courses emphasize the biological aspects of human development. Topics include man's evolution in terms of his place in nature, the historical development of life, classification and distribution of the races of mankind, and the nature and significance of human biological variation.

CULTURAL ANTHROPOLOGY

The courses examine the various designs for living which men in different parts of the world and in different times have developed to satisfy their biological, social, and psychological needs. Topics focus on the uniformities and variabilities of social and cultural life as seen through social organization, family structure, religion and language among contemporary, preliterate, peasant, and urban societies.

ARCHAEOLOGY/PREHISTORY

These courses cover the historical development, the theory, and the techniques of archaeology and the development of prehistorical cultures as revealed through excavation and analysis of their material remains. Many of the classes are oriented toward the practical application of archaeological methods and include archaeological site visitations and field and/or lab work. These classes sometimes have prerequisites and are intended for students who have more background in anthropology.

INDIAN AND NATIVE AMERICAN

Courses in this category deal with the origins and migrations of early man in the New World, his life and customs prior to the arrival of the Europeans, the impact of Westernization on his culture, and his contemporary problems. Cultures of North American tribes, South American tribes, and tribes that are indigenous to a specific locale such as California or the Pacific Northwest are included here.

SPECIALIZED CULTURAL

These courses include the study of specific cultures both within the U.S. and in other areas of the world and the study of specific cultural topics such as myth, folklore, religion, cultural communication systems, and culturally determined sex roles. These classes tend to deal with the topics under examination in greater depth in comparison to courses described above under Cultural Anthropology.

OTHER

Includes courses not easily placed in other categories such as principles and techniques of developing and running a museum, medical anthropology, and ethno-psychiatry.

Center for the Study of Community Colleges

INSTRUCTOR SURVEY

Your college is participating in a nationwide study conducted by the Center for the Study of Community Colleges under a grant from the National Science Foundation. The study is concerned with the role of the sciences and technologies in two-year colleges — curriculum, instructional practices and course activities.

The survey asks questions about one of your classes offered last fall. The information gathered will help inform groups making policy affecting the sciences. All information gathered is treated as confidential and at no time will your answers be singled out. Our concern is with aggregate instructional practices as discerned in a national sample.

We recognize that the survey is time-consuming and we appreciate your efforts in completing it. Thank you very much.

1a. Your college's class schedule indicated that in Fall, 1977 you were teaching:

_____ 11-13 _____

(Course) (Section)

If this class was assigned to a different instructor, please return this survey to your campus facilitator to give to the person who taught this class.

If the class was not taught, please give us the reason why, and then return the uncompleted survey form in the accompanying envelope.

b. Class was not taught because: (explain briefly) _____

_____

_____

Please answer the questions in relation to the specified class.

2. Approximately how many students were initially enrolled in this class?

Males _____ 14-16

Females _____ 17-19

3. Approximately how many students completed this course and received grades? (Do not include withdrawals or incompletes.)

Males _____ 20-22

Females _____ 23-25

4. Check each of the items below that you believe properly describes this course:

a. Parallel or equivalent to a lower division college level course at transfer institutions . . . . . ☐ 1 — 26

b. Designed for transfer students majoring in one of the natural resources fields (e.g., agriculture, forestry) or an allied health field (e.g., nursing, dental hygiene, etc.) . . . . . ☐ 2

c. Designed for transfer students majoring in one of the physical or biological sciences, engineering, mathematics, or the health sciences (e.g., pre-medicine, pre-dentistry) . . . . . ☐ 3

d. Designed for transfer students majoring in a non-science area . . . ☐ 4

e. Designed for occupational students in an allied health area . . . . ☐ 5

f. Designed for occupational students in a science technology or engineering technology area . . . . . ☐ 6

g. Designed as a high school make up or remedial course . . . . . ☐ 7

h. Designed as a general education course for non-transfer and non-occupational students . . . . . ☐ 8

i. Designed for further education or personal upgrading of adult students . . . . . ☐ 9

j. Other *(please specify):*_____ ☐ 0

5a. Instructors may desire many qualities for their students. Please select the one quality in the following list of four that you most wanted your students to achieve in the specified course.

1) Understand/appreciate interrelationships of science and technology with society . . . . . ☐ 1 — 27

2) Be able to understand scientific research literature . . . . . ☐ 2

3) Apply principles learned in course to solve qualitative and/or quantitative problems . . . . . ☐ 3

4) Develop proficiency in laboratory methods and techniques of the discipline . . . . . ☐ 4

b. Of the four qualities listed below, which one did you most want your students to achieve?

1) Relate knowledge acquired in class to real world systems and problems . . . . . ☐ 1 — 28

2) Understand the principles, concepts, and terminology of the discipline . ☐ 2

3) Develop appreciation/understanding of scientific method . . . . ☐ 3

4) Gain "hands-on" or field experience in applied practice . . . . . ☐ 4

c. And from this list, which one did you most want your students to achieve in the specified class.

1) Learn to use tools of research in the sciences . . . . . ☐ 1 — 29

2) Gain qualities of mind useful in further education . . . . . ☐ 2

3) Understand self . . . . . ☐ 3

4) Develop the ability to think critically . . . . . ☐ 4

6a. Were there prerequisite requirements for this course? Yes ☐ 1 No ☐ 2 — 30

b. IF YES: Which of the following were required? (CHECK AS MANY AS APPLY)

1) Prior course in the same discipline taken in high school ☐ 1 . . college ☐ 7 — 31

2) Prior course in any science taken in high school ☐ 2 . . college ☐ 8

3) Prior course in mathematics taken in high school ☐ 3 . . college ☐ 9

4) Declared science or technology major . . . . . ☐ 4

5) Achieved a specified score on entrance examination . ☐ 5

6) Other *(please specify):*_____ ☐ 6

7. Over the entire term, what percentage of class time is devoted to each of the following:

a. Your own lectures	_____ %	32/33
b. Guest lecturers	_____ %	34/35
c. Student verbal presentations	_____ %	36/37
d. Class discussion	_____ %	38/39
e. Viewing and/or listening to film or taped media	_____ %	40/41
f. Simulation/gaming	_____ %	42/43
g. Quizzes/examinations	_____ %	44/45
h. Field trips	_____ %	46/47
i. Lecture/demonstration experiments	_____ %	48/49
j. Laboratory experiments by students	_____ %	50/51
k. Laboratory practical examinations and quizzes	_____ %	52/53
l. Other *(please specify)*: _____		
_____	_____ %	54/55

Please add percentages to make sure they agree with total TOTAL: 100 %

8. How frequently were each of the following instructional media used in this class?

Also check last box if you or any member of your faculty developed any of the designated media for this course.

	Frequently used	Occasionally used	Never used	Developed by self or other faculty member	
a. Films	☐ 1	☐ 2	☐ 3	☐ 4	56
b. Single-concept film loops	☐ 1	☐ 2	☐ 3	☐ 4	57
c. Filmstrips	☐ 1	☐ 2	☐ 3	☐ 4	58
d. Slides	☐ 1	☐ 2	☐ 3	☐ 4	59
e. Audiotape/slide/film combinations	☐ 1	☐ 2	☐ 3	☐ 4	60
f. Overhead projected transparencies	☐ 1	☐ 2	☐ 3	☐ 4	61
g. Audiotapes, cassettes, records	☐ 1	☐ 2	☐ 3	☐ 4	62
h. Videotapes	☐ 1	☐ 2	☐ 3	☐ 4	63
i. Television (broadcast/closed circuit)	☐ 1	☐ 2	☐ 3	☐ 4	64
j. Maps, charts, illustrations, displays	☐ 1	☐ 2	☐ 3	☐ 4	65
k. Three dimensional models	☐ 1	☐ 2	☐ 3	☐ 4	66
l. Scientific instruments	☐ 1	☐ 2	☐ 3	☐ 4	67
m. Natural preserved or living specimens	☐ 1	☐ 2	☐ 3	☐ 4	68
n. Lecture or demonstration experiments involving chemical reagents or physical apparatus	☐ 1	☐ 2	☐ 3	☐ 4	69
o. Other *(please specify)*: _____	☐ 1	☐ 2	☐ 3	☐ 4	70

64

9. Which of the following materials were used in this class? CHECK EACH TYPE USED. THEN, FOR EACH TYPE USED, PLEASE ANSWER ITEMS A-D.

	A.	B.			C.		D.			
							How much say did you have in the selection of these materials?			
Check Materials Used	How many pages in total were students required to read?	How satisfied were you with these materials? Well-satisfied	Would like to change them	Definitely intend changing them	Did you prepare these materials? Yes	No	Total say	Selected them but had to verify with a chairperson or administrator	Was member of a group that selected them	Someone else selected them
☐ 1 Textbooks	_____ 13-15	16 ☐ 1	☐ 2	☐ 3	17 ☐ 1	☐ 2	18 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 2 Laboratory materials and workbooks	_____ 19-21	22 ☐ 1	☐ 2	☐ 3	23 ☐ 1	☐ 2	24 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 3 Collections of readings	_____ 25-27	28 ☐ 1	☐ 2	☐ 3	29 ☐ 1	☐ 2	30 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 4 Reference books	_____ 31-33	34 ☐ 1	☐ 2	☐ 3	35 ☐ 1	☐ 2	36 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 5 Journal and/or magazine articles	_____ 37-39	40 ☐ 1	☐ 2	☐ 3	41 ☐ 1	☐ 2	42 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 6 Newspapers	_____ 43-45	46 ☐ 1	☐ 2	☐ 3	47 ☐ 1	☐ 2	48 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 7 Syllabi and handout materials	_____ 49-51	52 ☐ 1	☐ 2	☐ 3	53 ☐ 1	☐ 2	54 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 8 Problem books	_____ 55-57	58 ☐ 1	☐ 2	☐ 3	59 ☐ 1	☐ 2	60 ☐ 1	☐ 2	☐ 3	☐ 4
☐ 9 Other *(please specify)* _____	_____ 61-63	64 ☐ 1	☐ 2	☐ 3	65 ☐ 1	☐ 2	66 ☐ 1	☐ 2	☐ 3	☐ 4

10. Please indicate the emphasis given to each of the following student activities in this class.

	Not included in determining student's grade	Included but counted less than 25% toward grade	Counted 25% or more toward grade	
a. Papers written outside of class	☐ 1	☐ 2	☐ 3	67
b. Papers written in class	☐ 1	☐ 2	☐ 3	68
c. Quick-score/objective tests/exams	☐ 1	☐ 2	☐ 3	69
d. Essay tests/exams	☐ 1	☐ 2	☐ 3	70
e. Field reports	☐ 1	☐ 2	☐ 3	71
f. Oral recitations	☐ 1	☐ 2	☐ 3	72
g. Workbook completion	☐ 1	☐ 2	☐ 3	73
h. Regular class attendance	☐ 1	☐ 2	☐ 3	74
i. Participation in class discussions	☐ 1	☐ 2	☐ 3	75
j. Individual discussions with instructor	☐ 1	☐ 2	☐ 3	76
k. Research reports	☐ 1	☐ 2	☐ 3	77
l. Non-written projects	☐ 1	☐ 2	☐ 3	78
m. Homework	☐ 1	☐ 2	☐ 3	79
n. Laboratory reports	☐ 1	☐ 2	☐ 3	80
o. Laboratory unknowns and/or practical exams (quantitative and qualitative)	☐ 1	☐ 2	☐ 3	12
p. Problem sets	☐ 1	☐ 2	☐ 3	13
q. Other *(please specify)*:_____	☐ 1	☐ 2	☐ 3	14

11. Examinations or quizzes given to students may ask them to demonstrate various abilities. Please indicate the importance of each of these abilities in the tests you gave in this course. (CHECK ONE BOX FOR EACH ITEM)

	Very important	Somewhat important	Not important	
a. Mastery of a skill	☐ 1	☐ 2	☐ 3	15
b. Acquaintance with concepts of the discipline	☐ 1	☐ 2	☐ 3	16
c. Recall of specific information	☐ 1	☐ 2	☐ 3	17
d. Understanding the significance of certain works, events, phenomena, and experiments	☐ 1	☐ 2	☐ 3	18
e. Ability to synthesize course content	☐ 1	☐ 2	☐ 3	19
f. Relationship of concepts to student's own values	☐ 1	☐ 2	☐ 3	20
g. Other *(please specify)*:_____	☐ 1	☐ 2	☐ 3	21

12. What was the relative emphasis given to each type of question in written quizzes and examinations? (PLEASE RESPOND BY CHECKING ONE OF THE THREE BOXES FOR EACH ITEM.)

	Frequently used	Seldom used	Never used	
a. Multiple response (including multiple choice and true/false)	☐ 1	☐ 2	☐ 3	22
b. Completion	☐ 1	☐ 2	☐ 3	23
c. Essay	☐ 1	☐ 2	☐ 3	24
d. Solution of mathematical type problems where the work must be shown	☐ 1	☐ 2	☐ 3	25
e. Construction of graphs, diagrams, chemical type equations, etc.	☐ 1	☐ 2	☐ 3	26
f. Derivation of a mathematical relationship	☐ 1	☐ 2	☐ 3	27
g. Other *(please specify)*:_____	☐ 1	☐ 2	☐ 3	28

13. What grading practice did you employ in this class?

ABCDF	☐ 1	29
ABCD/No credit	☐ 2	
ABC/No credit	☐ 3	
Pass/Fail	☐ 4	
Pass/No credit	☐ 5	
No grades issued	☐ 6	
Other _____ *(please specify)*	☐ 7	

14. For each of the following out-of-class activities, please indicate if attendance was required, recommended or neither.

	Attendance required for course credit	Attendance recommended but not required	Neither required nor recommended	
a. On-campus educational type films	☐ 1	☐ 2	☐ 3	30
b. Other films	☐ 1	☐ 2	☐ 3	31
c. Field trips to industrial plants, research laboratories	☐ 1	☐ 2	☐ 3	32
d. Television programs	☐ 1	☐ 2	☐ 3	33
e. Museums/exhibits/zoos/arboretums	☐ 1	☐ 2	☐ 3	34
f. Volunteer service on an environmental project	☐ 1	☐ 2	☐ 3	35
g. Outside lectures	☐ 1	☐ 2	☐ 3	36
h. Field trips to natural formation or ecological area	☐ 1	☐ 2	☐ 3	37
i. Volunteer service on education/ community project	☐ 1	☐ 2	☐ 3	38
j. Tutoring	☐ 1	☐ 2	☐ 3	39
k. Other *(please specify)*: _____	☐ 1	☐ 2	☐ 3	40

15a. Was this class conducted as an interdisciplinary course?

Yes	☐ 1	41
No	☐ 2	

b. IF YES: Which other disciplines were involved? _____
(please specify)

_____

_____ 42-
43-

16. Were instructors from other disciplines involved . . .

	YES	NO	
. . . in course planning?	☐ 1	☐ 2	44
. . . in team teaching?	☐ 1	☐ 2	45
. . . in offering guest lectures?	☐ 1	☐ 2	46

57

17a. Which of these types of assistance were available to you last term? CHECK AS MANY AS APPLY.

b. Which did you utilize? CHECK AS MANY AS APPLY.

	a. Assistance was available to me in the following areas	b. Utilized
a. Clerical help	47- ☐ 1	48- ☐ 1
b. Test-scoring facilities	☐ 2	☐ 2
c. Tutors	☐ 3	☐ 3
d. Readers	☐ 4	☐ 4
e. Paraprofessional aides/instructional assistants	☐ 5	☐ 5
f. Media production facilities/assistance	☐ 6	☐ 6
g. Library/bibliographical assistance	☐ 7	☐ 7
h. Laboratory assistants	☐ 8	☐ 8
i. Other *(please specify):*_____	☐ 9	☐ 9

18. Although this course may have been very effective, what would it take to have made it better? CHECK AS MANY AS APPLY.

a. More freedom to choose materials	☐ 1	49
b. More interaction with colleagues or administrators	☐ 2	
c. Less interference from colleagues or administrators	☐ 3	
d. Larger class (more students)	☐ 4	
e. Smaller class	☐ 5	
f. More reader/paraprofessional aides	☐ 6	
g. More clerical assistance	☐ 7	
h. Availability of more media or instructional materials	☐ 8	
i. Stricter prerequisites for admission to class	☐ 9	
j. Fewer or no prerequisites for admission to class	☐ 1	50
k. Changed course description	☐ 2	
l. Instructor release time to develop course and/or material	☐ 3	
m. Different goals and objectives	☐ 4	
n. Professional development opportunities for instructors	☐ 5	
o. Better laboratory facilities	☐ 6	
p. Students better prepared to handle course requirements	☐ 7	
q. Other *(please specify):*_____	☐ 8	

Now, just a few questions about you . . .

19. How many years have you taught in any two-year college? 51

- a. Less than one year . . . . . ☐ 1
- b. 1-2 years . . . . . ☐ 2
- c. 3-4 years . . . . . ☐ 3
- d. 5-10 years . . . . . ☐ 4
- e. 11-20 years . . . . . ☐ 5
- f. Over 20 years . . . . . ☐ 6

20. At this college are you considered to be a: 52

- a. Full-time faculty member . . . . . ☐ 1
- b. Part-time faculty member . . . . . ☐ 2
- c. Department or division chairperson . . . ☐ 3
- d. Administrator . . . . . ☐ 4
- e. Other *(please specify)*:

  _____ . . . ☐ 5

21a. Are you currently employed in a research or industrial position directly related to the discipline of this course? 53

Yes ☐ 1
No ☐ 2

b. IF YES: For how many years?_____ 54/55

c. If previously you had been employed in a related industry or research organization, please indicate the number of years:_____ 56/57

22. What is the highest degree you presently hold? 58

- a. Bachelor's . . . . . ☐ 1
- b. Master's . . . . . ☐ 2
- c. Doctorate . . . . . ☐ 3

IMPORTANT INSTRUCTIONS

Thank you for taking the time to complete this survey. Please seal the completed questionnaire in the envelope which is addressed to the project facilitator on your campus and return it to that person. After collecting the forms from all participants, the facilitator will forward the sealed envelopes to the Center.

We appreciate your prompt attention and participation in this important survey for the National Science Foundation.

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